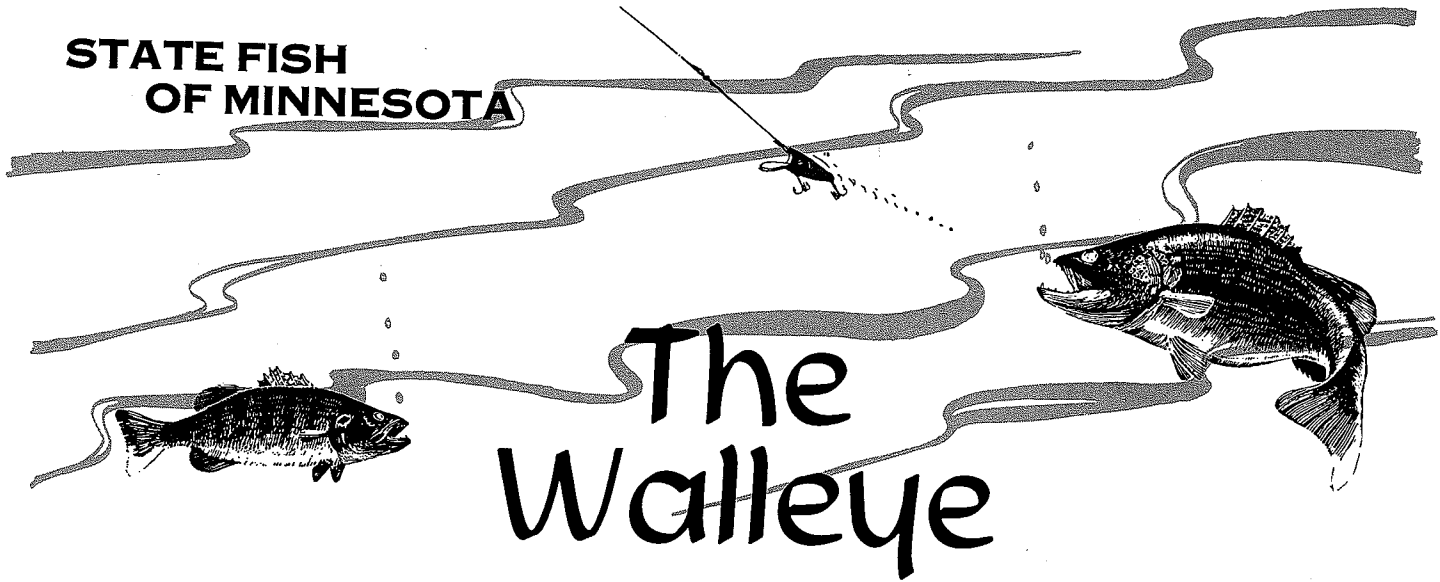


STATE FISH OF MINNESOTA



The Walleye

☞ In May, 1965, the Minnesota legislature passed a bill, which was signed into law by Governor Karl F. Rølvaag, designating the walleye as the state fish. There are several reasons why this aquatic animal should have been chosen as a symbol of Minnesota. The walleye is economically valuable to commercial fishermen and provides much enjoyable sport for anglers. It is abundant in the lakes and streams of the state, specially those in the north, and the flesh is very good to eat. One can safely say that nearly all fishermen consider it the most popular catch.

Name

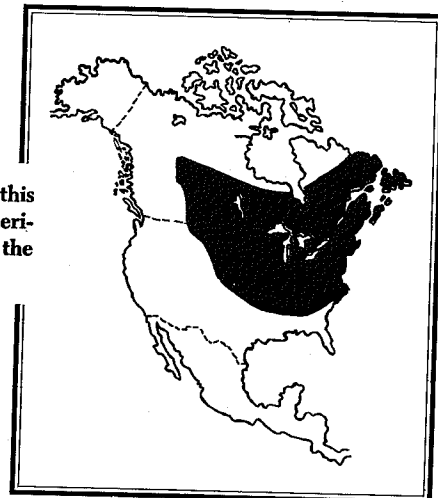
The walleye gets its name from the fact that its eyes have a milky appearance, rather like bluish white marbles. But *walleye* is only one of several names applied to this fish. *Walleyed pike* is one of the most common. This name is incorrect, however, because the walleye is not a pike but a perch. In fact it is the largest member of the perch family. Other names sometimes given to our state fish are: *yellow pike*, *yellow perchpike*, and *yellow pickerel*. The French Canadians have long called it the *doré* or *dory*. The Latin name for the fish is *Stizostedion vitreum vitreum*.

Description

The walleye has a long, slender, straight body covered with sandpaperlike scales, which deepen in tone from almost white on the belly to very dark on the top or back. The color varies from brown to olive green, yellow, and buff, and is always mot-

tled with specks and splotches. Sometimes a dark, vertical stripe extends from the back of the head to the tail.

The walleye has several distinctive features. One of them concerns the two dorsal, or back, fins. The edge of the fin just behind the head is jagged because of the sharp spines that protrude from it. The membranes which connect the last two spines of this fin are marked with a dark spot. The other dorsal fin has a more smoothly rounded outline. The tail is rather deeply notched, and the bottom fork is white along the tip and lower edge. The eyes of the walleye are rather prominent, in the small, tapered head. At night, with a light shining on them, they glow like the eyes of a cat. The mouth is large and the jaws are lined with sharp, needle-



The red area on this map of North America shows where the walleye is found.

like teeth. Most walleyes taken by fishermen are from 12 to 18 inches long, and weigh from one and a half to three pounds. The largest on record, taken in Canada, was 36 inches long and weighed more than 22 pounds.

Distribution

The walleye is widely distributed in the lakes and streams of the eastern United States and Canada, in states and provinces centering around the Great Lakes. Its exact range is shown on the map on page 11. All of Minnesota is walleye territory, but the clean, cold lakes in the northern half of the state seem to be especially ideal for these fish. The waters in which they are found make up about half of the state's fishing area.

Walleyes can live in many types of lakes, but they seem to thrive best in those that have more than two hundred acres, in which the water is less than forty feet deep. They prefer clear water which is kept in motion to the bottom by wave action or by stream current. Good examples of walleye lakes in Minnesota are: Mille Lacs Lake, Red Lake, Leech Lake, and Cass Lake. The walleye is also abundant in the Upper Mississippi and its tributary rivers.

Habits

Walleyes usually move about in schools, and where one is caught others are pretty sure to be found. They feed mostly at night, leaving the cool, deeper water as darkness approaches and going to the shallows and sand bars, and to weed beds at the water's edge, in search of food. The walleye

does not hibernate during the cold months, but remains active and feeding all winter long.

Food

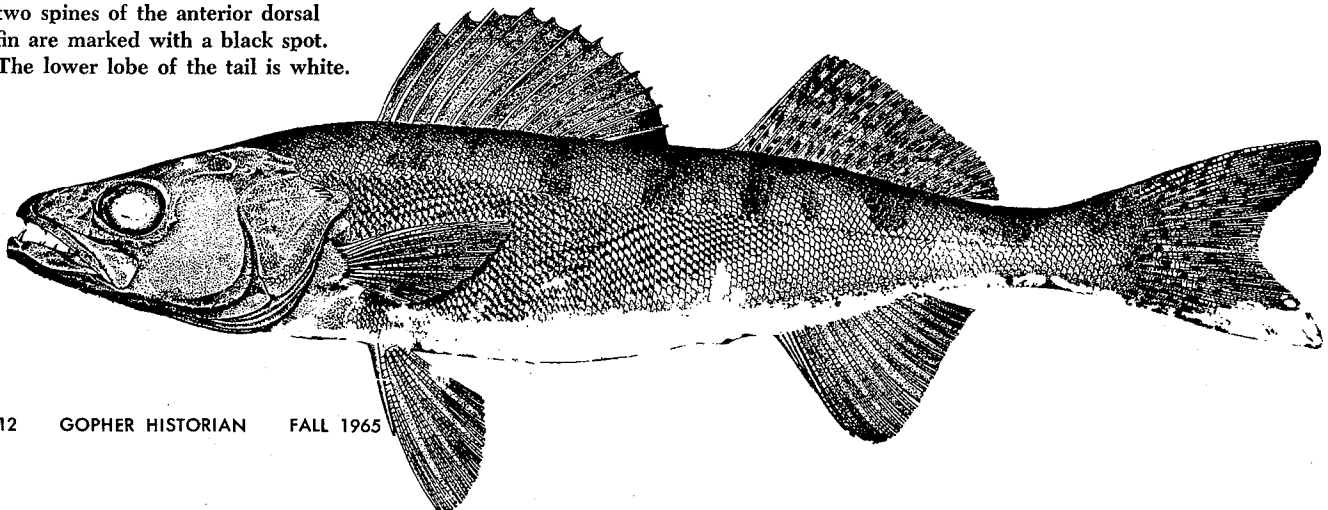
The walleye is a predator, feeding on other fish and on water insects. Live minnows are its main food, although it will eat almost any small animals that move through the water—frogs, crayfish, worms, May flies. The first food of the newly hatched fry consists of tiny water animals, such as water fleas. Later, it eats other insects and also worms. When the creature is only two or three inches long, it begins to consume other fish. Since the walleye is a strong, vigorous swimmer, it can overtake and seize almost any prey.

Life History

Walleyes begin to spawn soon after the ice melts in the spring. In Minnesota this is from the latter half of April to the first week in May. The fish then migrate to places where the eggs can be dropped on a clear, hard bottom of gravel or rocks in water from two to four feet deep. Sometimes the spawning site is a bed of sticks and stones at the bottom of a waterfall or stony riffles in a stream. The walleyes always choose places to spawn where the water is in motion, so that the eggs are rolled around. The average female walleye will deposit more than half a million eggs in one spawning run, but only a tiny fraction of them will hatch and survive to adulthood.

The eggs hatch within seven to twenty-eight days, depending on the temperature of the water. The fry are half an inch long when hatched, and each has a tiny yolk sac attached to its belly to provide nourishment for a few days until the animal can feed for itself. At the end of the first summer the little fish are from three to six inches long, and

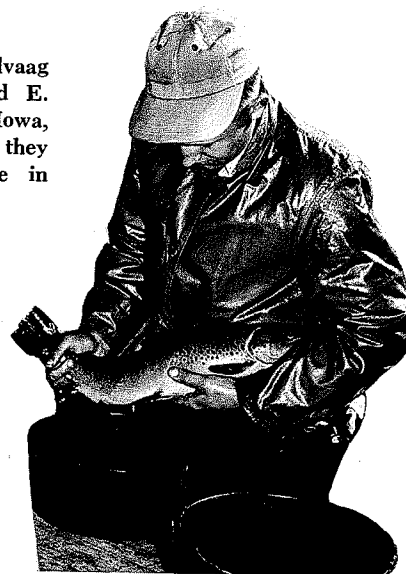
The walleye, which was made one of Minnesota's official symbols in 1965. This sketch shows the distinguishing characteristics of the fish. The walleye gets its name from the fact that its eyes are opaque. The last two spines of the anterior dorsal fin are marked with a black spot. The lower lobe of the tail is white.





Left: Governor Karl F. Rolvaag of Minnesota and Harold E. Hughes, chief executive of Iowa, with a string of walleyes they caught on Gunflint Lake in May, 1965.

Right: This picture shows how eggs are taken from female fish during the spawning season. The eggs are hatched in state hatcheries, raised to the size of fingerlings, and then stocked in lakes of Minnesota. The fish pictured here is not a walleye.



at the end of the second year they measure nine inches. After that they grow from two to three inches a year. By means of tagging fish, conservationists have discovered that the average life span of the walleye is seven years, with ten years as the upper limit.

Harvest

The walleye probably provides more sport for anglers in Minnesota than do all other game fish combined, and it is probably the best tasting fish in our inland waters. Sportsmen fish for walleyes from an anchored boat or while drifting or trolling. They may use artificial lures or natural bait such as worms, minnows, or night crawlers. Because the walleye feeds at night, it is most easily caught before dawn or after dark, during warm months. Many walleyes are caught in winter by ice fishermen.

Commercial fishers also prize the walleye highly. In Minnesota the Indian fishery at Red Lake takes around six hundred thousand pounds of walleyes a year. Another three hundred thousand pounds are taken by commercial fishers in Lake of the Woods and in Rainy Lake. The fish are obtained commercially by means of nets.

Management

In many lakes and streams of Minnesota the walleyes live and grow naturally, without help from man. The number of fishes can be increased,

however, by various practices, such as maintaining the spawning grounds and natural food supply, keeping the streams free of pollution, and building dams to raise the water level at certain places. This activity, called management, is carried on by the state department of conservation.

A most important part of the management of walleyes in Minnesota is the raising of small fish which are then "planted" or stocked in waters where they would otherwise be scarce or not found at all. This is done in the following manner. In the spring, the fish are caught in traps as they pass on their way to the spawning areas. Each female fish is "milked" of the eggs, which are collected in pans of water. Milt taken from the male fish in the same manner is added, to fertilize the eggs. This mixture is transferred to round-bottom glass jars and taken to hatcheries. There, under proper conditions, the eggs hatch in about ten days. The newly hatched fry are taken, in tank trucks, to rearing ponds where they are kept until they grow to be fingerlings, two to four inches long. Then the fish are again transferred, this time to the waters where they will grow to full size and probably be caught by some fishermen.

Walleyes can be propagated in this way successfully and cheaply. In Minnesota more than five million walleyes are raised each year and placed in eight hundred lakes of the state. This practice has been carried on for more than fifty years, and today Minnesota leads all other states in the hatching and planting of these fish.